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Herrick

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[54] **FLEXIBLE LARGE SCREEN DISPLAY HAVING MULTIPLE LIGHT EMITTING ELEMENTS SANDWICHED BETWEEN CROSSED ELECTRODES**

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[52] **U.S. Cl.** **313/511**; 40/542; 40/624

[58] **Field of Search** 313/511, 506; 345/76, 206; 40/542, 624

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[57] **ABSTRACT**

Active light-emitting components are integrated into a thin flexible plastic-wrap like film to provide an exceptionally large continuous display in which the film contains densely distributed light emitting elements addressed by a grid of transparent conductors. Inexpensive bulk processing techniques are used to produce plastic wrap with embedded components completely through the film to permit activation via a row column matrix. This topological layout provides mass redundancy of components, spatial decorrelation of component yields, and dramatic reduction in registration problems of metallic interconnects. The subject panel is especially well adapted to inexpensive flat panel TV screens or exceptionally large flat panel displays whose geometry is not limited to flat surfaces, but may take on curved or cylindrical configurations. The active element flexible film design can be used for electroluminescent tape for automotive pin striping and signage; for flexible glue-on displays and for video displays such as workstations, HDTV, theater screens and billboards.

16 Claims, 16 Drawing Sheets